Appendix D

Discount and Spread Calculations By Drug Type and Competition

			Reported as Discount from AWP*					Converted to Hartman "Spread"*				
	Count	Percentile	10th	25th	50th	75th	90th	10th	25th	50th	75th	90th
PAD												
Single-Source	279		13.3%	17.0%	21.3%	29.5%	46.9%	15.3%	20.5%	27.1%	41.7%	88.4%
Multi-Source	314		15.5%	30.4%	59.5%	75.2%	85.4%	18.4%	43.7%	147.2%	302.7%	586.1%
Total	593		13.7%	19.3%	31.7%	64.0%	79.6%	15.8%	24.0%	46.4%	177.8%	390.2%
SAD												
Single-Source	285		12.0%	13.4%	16.8%	21.6%	26.9%	13.6%	15.5%	20.1%	27.6%	36.8%
Multi-Source	168		12.0%	14.3%	17.5%	24.9%	56.0%	13.6%	16.7%	21.2%	33.1%	127.5%
Total	453		12.0%	13.7%	17.0%	21.6%	39.6%	13.6%	15.9%	20.5%	27.6%	65.5%
Total												
Single-Source	564		12.0%	15.1%	19.2%	24.0%	40.2%	13.7%	17.7%	23.8%	31.6%	67.3%
Multi-Source	482		12.5%	17.5%	39.2%	69.5%	82.0%	14.2%	21.2%	64.4%	227.9%	455.6%
Total	1046		12.1%	15.9%	21.6%	48.3%	74.1%	13.8%	18.9%	27.6%	93.4%	285.6%

Notes to Appendix D

*: Discounts are reported as the difference between AWP and acquisition cost, as a percentage of AWP (i.e., discount = (AWP-ASP) / AWP. The "spread" metric employed by Dr. Hartman takes the difference as a percentage of ASP (i.e., "spread" = (AWP-ASP) / ASP. Based on these formulae, the conversion from discount to "spread" is defined as:
spread = discount / (1-discount).

Data collected from reports listed in Exhibit C-2.

If a report lists the same data more than once, it is entered only once in the table; in the report by Kathpal Technologies, different NDC's resulted in different observations.

If a report, article or testimony references data from an earlier source already in the table, that data is not entered again.

Only data that lists prices comparing AWP and some form of acquisition cost or list a discount rate based on similar comparisons are included in the table; for some reports listing Medicare reimbursement and an acquisition cost, AWP can be calculated out of the reimbursement rate.

For those observations between 1998 and 2003, inclusive, and which reported Medicare prices and not AWP, we calculated out AWP, where AWP = Medicare Reimbursement/0.95.

For those observations from 2004 that have Medicare prices listed, we calculated out AWP one of two ways according to the Medicare Prescription Drug, Improvement and Modernization Act of 2003:

- For most drugs, reimbursement was set at 85% of AWP. Therefore, AWP was calculated as Medicare Reimbursement/0.85;
- For blood clotting factors, drugs that were not available for Medicare payment on April 1, 2003, vaccines, drugs for ESRD, and infusion drugs used with DME, reimbursement remained at 95% of AWP. Therefore, AWP was calculated as Medicare Reimbursement/0.95.

For those observations before 1998, the AWP was used to as the Medicare reimbursement.

If a report lists a range of prices, two observations are listed: one for the minimum and one for the maximum. For example if ASP is reported as the range between $1.00 and $2.00 and AWP is reported at $3.00, then one observation will have ASP = $1.00 and AWP =$3.00 and the second observation will have ASP = $2.00 and AWP = $3.00.
the maximum of the AWP and the minimum of the ASP (i.e., the minimum and maximum discounts from the relevant information).

If a report doesn't list the discount for each drug (as a percentage of AWP) but does list the AWP (or the information necessary to calculate AWP) and acquisition prices, the discount is calculated as Discount = (AWP-ASP)/AWP and ASP is some measure of acquisition cost.

A drug is flagged as a physician administered drug (PAD) if covered by Medicare Part B. Included are the following:

- Injectable drugs which are mostly administered by the physician (i.e. insulin would not be included);
- Drugs administered using durable medical equipment (DME), which include inhalation drugs like albuterol and ipratropium bromide;
- Immunosuppressive drugs;
- Oral anti-cancer drugs that have an injectable form;
- Oral anti-emetic drugs, which are those drugs that are used in cancer treatment to prevent nausea;
- Synthroid injection, which requires a statement explaining why the oral formulation couldn't be used must be provided;
- Those drugs not listed under Medicare Part B but which are primarily provided in injectable form are also classified as PAD, with an exception for insulin products.

A drug is flagged as multi-source if it is listed so in the source material. If the report doesn't identify the drug as single or multiple source, then other sources are referenced to see if there is more than one drug with the same active ingredient but different manufacturers not under any co-promotional or co-marketing agreement. Principal research sources include the FDA Orange Book, the Drugs@FDA website, news stories, and company reports.

In general, if generic equivalents are available a drug is considered multi-source; otherwise the drug is considered single-source; special cases include:

- Biologics, which includes therapies such as Albumin, Botulinum, Hepatitis B Vaccine, Immune Globulin and Pneumococcal Vaccine;
- A generic version of Paclitaxel was released in September of 2000; any observations of Paclitaxel for that year are flagged as single source;
- Albuterol was co-marketed by Glaxo and Schering as Ventolin and Proventil until the first generic entered the market in 1992; during this period, the drug is flagged as single-source;
- Epotein Alfa, before it went generic, was co-marketed under the brand names of Procrit and Epogen; during this period, the drug is flagged as single-source;
- Hydropres, whose formula includes resperdine and hydrochlorothiazide, is considered multi-source because each of those molecules was multisource.

EPO is reimbursed differently depending on HCPCS codes (HCPCS code for EPO for non-ESRD is Q0136; HCPCS codes for EPO for ESRD are Q9920-9940), but all EPO data is included.

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